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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,500	07/03/2003	Yaoqi J. Liu	56056US002	4426
32692	7590	08/24/2004	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			NGUYEN, THONG Q	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,500

Applicant(s)

LIU ET AL.

Examiner

Thong Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 16-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/3/2003
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention I in the reply filed on 6/4/2004 is acknowledged.

As a result of applicant's election, claims 1-15 are examined in this Office action, and claims 16-29 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Information Disclosure Statement

2. The information disclosure statement filed on 7/3/2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

In particular, the reference titled thereof "Optimization of Interference filters...heat mirrors" labeled as "C1" in the form PTO-1449 has been lined-through because applicant has failed to provide a copy of the reference.

Drawings

3. The drawings contain twenty-eight sheets of figures 1-25h were received on 7/3/2003. These drawings are approved by the Examiner.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. The claims are objected to because they include reference characters which are not enclosed within parentheses. In particular, each of claims 1 and 13 is objected because each claim contains reference character thereof "7A1B1A7B1A1B" which is not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

6. Claim 9 is objected to because of the following informalities. Appropriate correction is required.

In claim 9: the claim recites a layer having a feature so-called "PVB" (see line 1).

Applicant should provide a complete term or a definition for the "PVB".

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1 is rejected under 35 USC 112, second paragraph because it is unclear about the structure of the device claimed. The claim as recited in the first fifteen lines of the claim discloses an optical body having a first effective optical packet of contiguous optical layers bounded by optically thick layers wherein the optical layers form a plurality of unit cells each has six optical layers. However, on lines 16-21, the claim recites a feature which compares the variability in transmission of the optical body recited on first fifteen lines of the claim to a second optical body having the feature thereof "identical to the first-mentioned optical body except for having a second effective optical packet substituted for the first effective optical packet...first cyclic permutation" (lines 17-21). As a result, it is unclear the structure of the device claimed in the present claim 1.

b) Claim 4 is rejected under 35 USC 112, second paragraph for the following reason. In claim 4: the claim recites that the number of unit cells in the optical packet is a noninteger number (see lines 1-2 of the claim). Such a recitation is unclear because it is unclear which number is considered as a "noninteger" number. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so

redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

c) The remaining claims are dependent upon the rejected base claim and thus inherit the deficiency thereof.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 3, 7-8, 10-11 and 14-15, as best as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Arends et al (U.S. Patent No. 5,360,659).

Arends et al disclose a film for reflecting infrared light and for transmitting the visible light. In the embodiment as provided in columns 3-4 and 6-8 and shown in figures 2-3, the film comprises a multiple unit cells which is understood as an integer number of unit cells. Each unit cell has six layers of different materials A,B wherein the layers are alternatively arranged in a predetermined cyclic permutation. The refractive index of material A is larger than that of the material B as can be seen in columns 4 and 7. The thicknesses of the layers are different and in a gradient structure as can be seen in columns 6-7. The use of two thick layers contained glazing materials cover the unit cells or in between the layers of the unit cells is suggested as can be seen in column 7. The infrared light reflected by the film is at least 50% in the range of 770-2000 nm and the visible

light transmitted by the film is at least 50% in the range of 380-770 nm with its transmission is varied. See columns 3-4.

Regarding to the feature recited the comparison between the visible transmission of the first optical body and the that of the second optical body having different optical package as recited on last six lines of claim 1, such a feature is not considered due to the feature has not constituted the structure of the first optical body as recited in lines 1-15 of the claim.

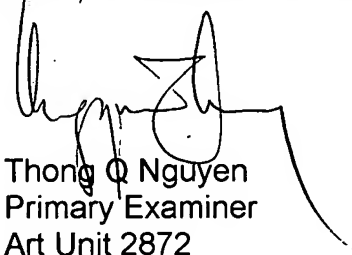
Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen
Primary Examiner
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